

Message Text

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PAGE 01 STATE 105672
ORIGIN OES-07

INFO OCT-01 EUR-12 ISO-00 SOE-02 AID-05 CEA-01 CIAE-00
COME-00 DODE-00 EB-08 DOE-15 H-01 INR-10 INT-05
L-03 NSAE-00 NSC-05 OMB-01 PM-05 ICA-11 SP-02
SS-15 STR-07 TRSE-00 ACDA-12 IO-13 NRC-05 CEQ-01
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DOE/IA - S CEJA

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P 252243Z APR 78
FM SECSTATE WASHDC
TO AMEMBASSY BRUSSELS PRIORITY
AMEMBASSY PARIS PRIORITY
AMEMBASSY BONN PRIORITY
INFO AMEMBASSY VIENNA PRIORITY

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USEEC ALSO FOR EMBASSY, USIAEA

E.O. 11652: NA

TAGS: TECH, ENGR

SUBJECT: IMPLEMENTATION OF U.S. HEU POLICY

REFS: A. 77 STATE 283271; B. STATE 88681

1. REFTEL A DESCRIBED REVISED U.S. HIGHLY ENRICHED
URANIUM (HEU) SUPPLY POLICY, WHICH INCLUDED PLANS TO WORK
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PAGE 02 STATE 105672

WITHIN U.S. AND INTERNATIONALLY TO DEVELOP NEW LOW ENRICHED
FUELS (OR HEU FUELS WITH THE LOWEST POSSIBLE ENRICHMENTS)
WITH PERFORMANCE CLOSELY MATCHING THAT OF CURRENT FUELS,
WHICH GENERALLY ARE ENRICHED EITHER TO 70 PERCENT OR
93 PERCENT U-235. THE OBJECTIVE OF THIS EFFORT IS TO
REDUCE TO A MINIMUM USAGE AND INVENTORIES OF WEAPONS-USABLE
ENRICHED URANIUM. REFTEL B DESCRIBED A FIVE-YEAR, TEN

MILLION DOLLAR DOE LOW ENRICHED FUEL DEVELOPMENT PROGRAM.

2. ONE OF OUR CONCERNS IS HOW SUCH TECHNOLOGY, IF SUCCESSFULLY DEVELOPED, CAN BE TRANSLATED INTO A COMMERCIAL FUEL FABRICATION CAPABILITY. THERE HAS BEEN LITTLE RECENT INTEREST BY U.S. INDUSTRY IN THE FABRICATION OF RESEARCH TEST REACTOR FUELS, EXCEPT FOR GENERAL ATOMIC TRIGA FUEL (WHICH HAS BEEN, IN SOME CASES, ADAPTED FOR USE IN REACTORS

DESIGNED FOR SO-CALLED MTR PLATE-TYPE FUEL). THE ONLY U.S. COMMERCIAL FABRICATOR OF METALLIC URANIUM-ALUMINIUM FUELS, U.S. NUCLEAR, IS IN FINANCIAL DIFFICULTY AND CURRENTLY SHUT DOWN. ATOMICS INTERNATIONAL AND METALS AND CONTROL HAVE LIMITED CAPABILITY FOR PRODUCTION OF ALUMINIDE AND OXIDE PLATE FUELS, RESPECTIVELY, AS A DOE COST-PLUS-FIXED-FEE CONTRACTORS USING DOE-OWNED EQUIPMENT. THEIR CAPABILITIES ARE LARGELY DEDICATED TO PRODUCTION OF FUEL FOR DOE REACTORS OR UNIVERSITY REACTORS RECEIVING FINANCIAL ASSISTANCE FROM THE DOE.

3. ALL OF THE METALLIC URANIUM-ALUMINIUM PLATE FUELS CURRENTLY BEING PRODUCED (INCLUDING SOME FOR U.S. REACTORS) ARE FABRICATED IN EUROPE, LARGELY, IF NOT ENTIRELY, BY CERCA AND NUKEM. (THESE TWO FABRICATORS ALSO ARE PRODUCING SOME ALUMINIDE FUEL, PARTICULARLY FOR THE HIGH-FLUX GRENOBLE REACTOR.) WE ARE AWARE THAT CEA HAS BEEN DOING LIMITED OFFICIAL USE

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PAGE 03 STATE 105672

DEVELOPMENT WORK ON LOW-ENRICHED FUELS AND WE HAVE RECENTLY MENTIONED TO THE FRENCH, IN A VERY GENERAL SENSE, POSSIBLE INTEREST IN EXCHANGING INFORMATION BETWEEN OUR RESPECTIVE PROGRAMS. TO THE BEST OF OUR KNOWLEDGE, THERE IS NO OTHER SIGNIFICANT EUROPEAN DEVELOPMENT UNDERWAY ON LOW ENRICHED FUELS, ALTHOUGH WE BELIEVE THE BELGONUCLEAIRE MAY HAVE DONE SOME WORK ON URANIUM SILICIDE, WHICH APPEARS TO HAVE PROMISE FOR USE IN HIGH-POWER DENSITY REACTORS.

4. WE WOULD LIKE TO EXPLORE WITH THE AFOREMENTIONED EUROPEAN FABRICATORS AND RESEARCH ORGANIZATIONS THEIR POSSIBLE INTEREST IN FABRICATING LOW ENRICHED FUELS AND/OR COOPERATING IN THE DOE LOW ENRICHED FUEL DEVELOPMENT PROGRAM. AT THE SAME TIME, WE WOULD BE PREPARED TO DESCRIBE CURRENT U.S. POLICY ON SUPPLY OF HEU AND ITS ANTICIPATED IMPACT ON FUTURE ENRICHMENTS AND TYPES OF RESEARCH AND TEST REACTOR FUELS. MEETING OF IAEA ADVISORY GROUP ON RESEARCH REACTOR RENEWAL AND UPGRADING PROGRAMS IN VIENNA ON MAY 23-26 WILL BRING USG PERSONNEL WITH BACKGROUND IN THIS AREA TO EUROPE DURING MAY AND WE WOULD LIKE TO TAKE ADVANTAGE OF THIS TO HOLD SUCH EXPLORATORY DISCUSSIONS. IT IS ANTICIPATED THAT THE U.S. GROUP WOULD CONSIST OF

R. WILLIAMSON, ACDA, S. CEJA, DOE, D. STAHL AND R. LEWIS,
ANL (MANAGING DOE'S LOW URANIUM ENRICHMENT DEVELOPMENT
PROGRAM), AND D. HOYLE, DEPARTMENT OF STATE.

5. ADDRESSEE POSTS ARE REQUESTED TO MAKE THE FOLLOWING
ARRANGEMENTS.

FOR PARIS -- REQUEST MEETINGS WITH CEA AFTERNOON OF MAY 17
(TEAM ARRIVING FROM U.S. IN MORNING) AND WITH CERCA MAY 18.

(WE HAVE ALREADY HAD SOME DISCUSSIONS IN WASHINGTON ON
GENERAL SUBJECT OF LOW ENRICHED FUEL WITH P. COURCIER AND
J. DOUMERE OF CERCA.) HOTEL REQUESTED FOR TEAM MEMBERS
NIGHTS OF MAY 17 AND 18.
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PAGE 04 STATE 105672

FOR BRUSSELS -- PER HOYLE-PURPOSE APRIL 21 TELECON, TEAM
WISHES TO MEET WITH BELGONUCLEAIRE MAY 19 (TEAM ARRIVING
AIR FRANCE 648, 0855 HOURS FROM PARIS). HOTEL REQUESTED
NIGHT OF MAY 19.

FOR BONN -- WOULD LIKE TO MEET WITH NUKEM MAY 22
(TEAM LEAVING FOR VIENNA AT 1640 HOURS). (HOYLE HAD
MENTIONED POSSIBILITY OF MEETING OF THIS NATURE TO
M. STEPHANY OF NUKEM IN WASHINGTON SEVERAL MONTHS AGO AND
WAS TOLD THAT NUKEM WOULD WELCOME SUCH MEETING.) HOTEL
REQUESTED (ASSUME FRANKFURT) NIGHTS OF MAY 20 AND 21.

ALL HOTEL ACCOMMODATIONS SHOULD BE MODERATE-PRICED SINGLES
WITH BATH, IF POSSIBLE. ALSO, PLEASE MAKE ANY NECESSARY
ARRANGEMENTS FOR LOCAL TRAVEL (E.G., FRANKFURT TO WOLFGANG
FOR NUKEM VISIT). WILL ADVISE DETAILED TIMES OF ARRIVAL
WHEN MEETING DATES FIRMED UP.

6. TEAM WOULD BE PLEASED TO HAVE SCICOUN AND/OR DOE
REPRESENTATIVE ACCOMPANY FOR ALL DISCUSSIONS IN HOST
COUNTRY.

7. WE ARE AIR-POUCHING COPIES OF ARGONNE REPORT RSS-TM-7,
"A PROPOSED NATIONAL PLAN FOR DEVELOPMENT OF HIGH-URANIUM-
DENSITY RESEARCH AND TEST REACTOR FUEL TO ACCOMMODATE USE
OF LOW URANIUM ENRICHMENT" TO POSTS SO THAT ORGANIZATIONS
INVOLVED WILL HAVE BACKGROUND FOR THESE DISCUSSIONS. VANCE

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